



Rec'd PCT/PTO

10 OCT 2002

SEQUENCE LISTING

<110> Greaves, David
Thomsen, Lindy
Ford, Martin
Catchpole, Ian Richard

<120> DNA Constructs Based On The elf4A Gene
Promoter

<130> PG3717

<140> 10/019,800

<141> Unassigned

<150> PCT/GB00/02569

<151> 2000-07-06

<150> GB9915638.2

<151> 1999-07-06

<150> GB9929547.9

<151> 1999-12-14

<160> 62

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 32

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 1

atctggtacc ctacgatatc gctgttgatt tc

<210> 2
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 2
atctggtacc tggaggctga gacctcgcc

29

<210> 3
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 3
atctggtacc atggctgcca ggcctcgagg

30

<210> 4
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 4
atctggtacc ggctgcgggg cgggcc

26

<210> 5
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 5
atctggtacc taggaactaa cgtcatgccg 30

<210> 6
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 6
atctggtacc gttgctgagc gccggcagcg 30

<210> 7
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 7
atctggtacc aaaccaatgc gatggccgg 29

<210> 8
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 8
atctggtacc cgggcgctct ataagttgtc g 31

<210> 9
<211> 30
<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 9

atataagctt tgatccttag aaactagggc

30

<210> 10

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 10

atctggtacc gactggattt ccaccag

27

<210> 11

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 11

atctggtacc acccagggcc acagg

25

<210> 12

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 12

atctggtacc tgtggccctg ggtgg

25

<210> 13
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 13
atctaagctt cccggtaga aaggcatttg

30

<210> 14
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 14
tctaagcttg gatctgttg tttaaagcat

30

<210> 15
<211> 38
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 15
atctaagctt gtcgaccccg aaggcgatcat cgaggtga

38

<210> 16
<211> 31
<212> DNA
<213> Artificial Sequence

<220>

<223> Primer

<400> 16

atctaagctt gaattctagg ggatgcaaag a

31

<210> 17

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 17

atctaagctt gtatcaaggg tgagacc

27

<210> 18

<211> 31

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 18

atctaagctt cataacctaa acaaataaat t

31

<210> 19

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 19

atctaagctt ctcagcaggt aagagtgg

28

<210> 20

<211> 34

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 20

atctaagctt gaattccctt ctgtatctga gcag

34

<210> 21

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 21

atctaagctt tgctgggttc tctctgg

27

<210> 22

<211> 33

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 22

atctaagctt gaattcgggc tagagaagaa aaa

33

<210> 23

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 23

atctaagctt cccaggtgag ggcagt

26

<210> 24

<211> 35

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 24

atctaagctt gaattcagca aaactaccta gtgga

35

<210> 25

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 25

atctaagctt cgtggaacga gaggtgg

27

<210> 26

<211> 34

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 26

atctaagctt gaattccttc cactcctgga gggtt

34

<210> 27

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 27

atctaagctt tgggtgtgttt gccccct

27

<210> 28

<211> 35

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 28

atctaagctt gaattctgct ggaagagaaa acaaa

35

<210> 29

<211> 29

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 29

atctaagctt ctgacctgct ggtgagtag

29

<210> 30

<211> 33

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 30

atctaagctt gcctctggcc tacgtcaaga aag

33

<210> 31

<211> 1396
<212> DNA
<213> Homo sapiens

<220>
<221> Unknown
<222> (1117)
<223> Primer
<223> n is uncertain

<400> 31
gtaagaaagg catttgcaag agattgtggc tgcttatattt gccgccccct tccgacgggc 60
ccgcccgggg tagctgagag gccaccagg gttgcgggag aaaccgaacc gggtaggggg 120
agggtccgac ttggagggggc gagggggaag acccacggcc gacgcggcca ccagggtcgag 180
gcgaggggta gggacagccc ggctagggtc aggcgtgcga ggtctgttac gaggcctcga 240
cccgaggcgg tgccatgcgc gaagccccgg cgctgagtgg cgagacgggg tcgcgacctg 300
gcgtagggaaa gaaaggtgga ggcgccgcc actatgtgtg gccagagacc ggcagggtccg 360
gttgccctccc tgtgccgggg gagggacggc gcgcgggggt ccggagcatt ctgacgggtac 420
cactcgcgag aggcgggggt gcctggctct tagatccagt cacttcgtcg cggctaaaaac 480
acgggtcggg gagaagaaac cggccgttca gtgtgctggg tttcttgacg gccaggactg 540
agcctaaccc cgaggagcgg ccgcgtgagg caccaggagc ccaccggcg ccgggcgggc 600
gggtccattt tgccgcacaa gccgggctat tggcaaactg cggatgggca ggtccacctt 660
ccttcggggg tgagcggcct gaggtatggg agggcgacgc tacttcgcga cgggggcggg 720
cgggatgtgg attgttccat ggaggggtgg gagacrcgc cgggtggtcg arggagcgag 780
cacatggtgg cctgaggcgt tccccctccc cagtctgctt cgcttctaag tgttgtgcaa 840
tctccccctt tgctagctcg gcttgggctc attgtgcgcg aggcgccac cgcccgcggc 900
ctccacatc cgggcaacgc gagggggggg cttcggctgg agggagtggg ggagggcgcg 960
ggcgggatga cgtgggggga aggggatgtc ctaccctccg atctgggagg tgaagggcg 1020
gacttccagc gcgctggtgc tgcggtggga ggtgcacgcg cttgggcttt aagcggctgg 1080
gtcggggcca cgtggacccg gcggcaagca ccacctntgg gcaccgtgag cgcggcgcca 1140
cgctgcggc cctgtcttca gaaaggtca ccccttatg tcgggggtgg cctggcctga 1200
gccgctgcct gcatggggca aatgcctcag ttttatagaa actcctcctt tgggtatttt 1260
ttgggagctg gtgggagttg gatctgggac agcaggttga tggcatcatg caggccactc 1320
ctgacagagc ccggctgtca ggatttctga gtgcttcggg cgggcagggg acaaaaactta 1380
tgctttaaac caacag 1396

<210> 32
<211> 627
<212> DNA
<213> Homo sapiens

<220>

<223> Primer

<400> 32

```
gtgagactgg agaaatggaa ttctgtcctc cccattaca actttcagcc gtatagagtt 60
agagtggcct cttgattgat ttcccagatc atctagaagc agctgggttc cctaaaggga 120
ggaggggtgt aagctctgag gcttttgtaa rtasgcacca sattctgttt gctcggagac 180
tacagctcag ctccaccttt tccatgactc aagctttaat ttctttgcat cccctaggtg 240
agacctctca gtcccagatg cccatctcat atcagccagg gacaaagcaa ctccctgttc 300
atcccagctt ggcttttgat ccgtgcccat gcctgggtca tgccttggac acatagggtt 360
cctttaaaga ggtggtattg tagccagctt atatttgcat ctacagccat gtttctagtc 420
cagcttggtg tgcaatacta gatgagttaa taactgggtc ttgtttctga tctgggtccc 480
attgtgtaac tgtgttgatt gggaaggtag tttgtgagcc atgaaatgct tggttcattg 540
gttgcttatt gacctatta acctaggact tgaatatccc aaagggtatg ctctttacca 600
cattcaactc ctaatttatt tgtttag 627
```

<210> 33

<211> 363

<212> DNA

<213> Homo sapiens

<220>

<223> Primer

<400> 33

```
gtgagtaatt cggttctcca atcccctggg tcactttgct cttgtgcacg ctttccagtc 60
tttcagcgta agccagagtc attcccaagg atgctgggtt ctctctgggg gaagagctgc 120
tctgtgatgg agcccatgcg tgatcatctga gcctctggct tccctgccag tgcagccctg 180
gcagtgtcct acttcccagg gctgttgtct gcctggcggg aaggctcctg gcaaaggatc 240
agtctttgta ctctgagagc agactacttg gctcctctct gttttttatc agcgaagttg 300
gatatatctc tcccacattt ccctaatacat atgctatata ttggcttttt ttttcttctc 360
tag 363
```

<210> 34

<211> 179

<212> DNA

<213> Homo sapiens

<220>

<223> Primer

<400> 34

gtgagggcag tcttgcttga atagctaata attcttgaaa aatagtaagt gccaggggaa 60
accaaatact ggattcttga gcctttttat gcattctgctt cagtttttagg tgtggctagg 120
gaagggagca ggccctcagga aggaaccagc actctaagac tggccttttt ttccactag 179

<210> 35

<211> 81

<212> DNA

<213> Homo sapiens

<220>

<223> Primer

<400> 35

gtggggccca gtgcaggagg cgggcctggt agtgagttgt tgggtatagc ccctgactga 60
tttttgtccc ccaacctcca g 81

<210> 36

<211> 248

<212> DNA

<213> Homo sapiens

<220>

<223> Primer

<400> 36

gtgagtagag ggaactgata gcaaaggcag aaggaggat ccaaggtgat tccctctcca 60
aggggacatc agtgcctctc aggaaagtag cagcttgga tagaatctgg catgcctaag 120
gcctttgggg aactgggatg cttatttcct ctgccttcct tggctgcca catggatgcc 180
taagtgtctt ccctccggga tagagtgtcc tccgtgcaca tgctgaagag ttgtctttct 240
tgacgtag 248

<210> 37

<211> 419

<212> DNA

<213> Homo sapiens

<220>

<223> Primer

<400> 37

```
ctacgatatc gctgttgatt tccttcatcc cctggcacac gtccaggcag tgtcgaatcc 60
atctctgcta caggggaaaa acaaataaca tttgagtcca gtggagaccg ggagcagaag 120
taaagggaag tgataacccc cagagcccgg aagcctctgg aggctgagac ctgcggcccc 180
ttgcgtgata gggcctacgg agccacatga ccaaggcact gtcgcctccg cacgtgtgag 240
agtgcagggc cccaagatgg ctgccaggcc tcgaggcctg actcttctat gtcacttccg 300
taccggcgag aaaggcgggc cctccagcca atgaggctgc ggggcggggc ttcaccttga 360
taggcactcg agttatccaa tggcgcctgc gggccgatgt ctgcgagcca ggattcccg 419
```

<210> 38

<211> 564

<212> DNA

<213> Homo sapiens

<220>

<223> Primer

<400> 38

```
ctacgatatc gctgttgatt tccttcatcc cctggcacac gtccaggcag tgtcgaatcc 60
atctctgcta caggggaaaa acaaataaca tttgagtcca gtggagaccg ggagcagaag 120
taaagggaag tgataacccc cagagcccgg aagcctctgg aggctgagac ctgcggcccc 180
ttgcgtgata gggcctacgg agccacatga ccaaggcact gtcgcctccg cacgtgtgag 240
agtgcagggc cccaagatgg ctgccaggcc tcgaggcctg actcttctat gtcacttccg 300
taccggcgag aaaggcgggc cctccagcca atgaggctgc ggggcggggc ttcaccttga 360
taggcactcg agttatccaa tggcgcctgc gggccggagc gactaggaac taacgtcatg 420
ccgagttgct gagcgccggc aggcgggggc ggggcggcca aaccaatgcg atggccgggg 480
cggagtcggg cgctctataa gttgtcgatg ggcgggcact ccgccctagt ttctaaggat 540
catgtctgcg agccaggatt cccg 564
```

<210> 39

<211> 578

<212> DNA

<213> Homo sapiens

<220>

<221> (574)

<222> Primer

<223> n is uncertain

<400> 39

```
ctacgatatc gctggttgatt tccttcatcc cctggcacac gtccaggcag tgtcgaatcc 60
atctctgcta caggggaaaa acaaataaca tttgagtcca gtggagaccg ggagcagaag 120
taaaggggaag tgataacccc cagagccccg aagcctctgg aggctgagac ctgccccccc 180
ttgcgtgata gggcctacgg agccacatga ccaaggcact gtcgcctccg cacgtgtgag 240
agtgcagggc cccaagatgg ctgccaggcc tcgaggcctg actcttctat gtcacttccg 300
taccggcgag aaaggcgggc cctccagcca atgaggctgc ggggcggggc ttcaccttga 360
taggcactcg agttatccaa tgggtgcctgc gggccggagc gactaggaac taacgtcatg 420
ccgagttgct gagcgccggc aggcggggcc ggggcggcca aaccaatgcg atggccgggg 480
cggagtcggg cgctctataa gttgtcgatg ggccggcact ccgccctagt ttctaaggat 540
catgtctgcg agccaggatt cccgmtsraa srgnassr 578
```

<210> 40

<211> 5318

<212> DNA

<213> Homo sapiens

<220>

<221> Unknown

<222> (4112,4242,4252,4272,4289,4484)

<223> Primer

<223> n is uncertain

<400> 40

```
gcggccgcat aatacgactc actataggga tctaggaagg cctctcatag ctgagacgtg 60
aatgatgagc agccagccat gcgcagacct gggaatagca agtacacaag acccatagtg 120
aaaaaccatg gctgaggaac agagggcttg tgggggtgac ctgtgtagtt ggcgagagt 180
gagcaaaggg agatggatac aaaattcggc cagagagtag atcatgtaag acatgtacgg 240
taggctgagg aggggggatt ttattgctg tatactgaga agccattgag ttttaagcag 300
gctgagaagt gccttctgtt ttaaactcct gtttcaatga cagattgaaa ggggggcaag 360
aatggaagca ggaacagagc acagtagtcc aggtgagaaa cttgaactgg agtgctaaag 420
gaagagagag agagtagttt tatgtaggat aaattttacg agtaaaacca gtaggactga 480
caggctctgt gatactgaga gatacatatt tgtctcctga ccaggctcct ggcatccaac 540
ttctaaaatc cttggaatct ccagtgatgt gtgtttttgt gtgctgatga gttgattcat 600
ggctagcccc tctagggtggc ttcatgatta gagggttgga actttcagcc tcacccccac 660
caacttctct ggaggggaat ggggccaaag gttaaggcaa tcaactgagga tcagtgattt 720
aatcagtcac gcctagtagt gaagcctcta aaaaccggaa aggggcccggg ttgcgcggcg 780
cacgcctgta ctcccgccac tttgggaggc tgaggcagat ggatcgcaag gtcaagagat 840
tgagaccagc ctggccgacc tggcgaaacc ctgtctctac taaaaatatg aaaattagct 900
```

gggcgtgggtg	cgtgogcctg	tagtccccgg	gaggctgagg	caggagaatc	gcttgaaccc	960
gggaggcaga	ggttgcagtg	agccgagatt	gtgccactgc	actccaccct	gggtgacaga	1020
gtgaaactct	gtctcaaaaa	agaaaaaaaa	acccgagagg	aggagtttgg	agacattcta	1080
gatagctgaa	ggcatggagg	ctgcccacag	gatggtctgc	caggcctctt	cccgggtacct	1140
ttccctgtgc	atcttttcat	ctgtactctt	tgtactaccc	tttgtttaata	aactggtaaa	1200
tgtgtttcca	tgagtctctg	gagctgctct	aacaaattaa	tcaaattcaa	ggaggggggtc	1260
atgggaacgc	tgatctaacc	agttggtgag	aaacacagat	aaaacaacct	ggggcttacg	1320
actggcatca	gaattggggg	cagccttgtg	agactgagcc	ctaaacctgt	gacacattat	1380
ctccaggtag	atagtgttgg	aattgaattg	ggggataccc	agctgtgtcc	accgcaaaat	1440
tgcttgcttg	gttggttggg	gagagaaagc	cccacaaaca	cttcttggtg	accacagggtt	1500
acagaagtat	tttgtgttgt	gagagtatag	taggaaagaa	gattttgtttt	tttgccggggc	1560
gcggtggctc	acgcctgtaa	tcccagccct	ttgggaggct	gaggcgggcg	gatcaccagg	1620
tcaggagatc	aagaccatcc	tggctaacac	agtgaacccc	tgtctctact	aaaaatacaa	1680
aaaattagcc	gggcgagggtg	gcacgtgtct	gtagtccaag	ctacttggga	ggctgaggca	1740
ggagaatggc	atgaaccacg	gaggtggagc	ttgcagtgag	gcaagatcac	gccactgcac	1800
tccagtctgg	gcaacagagc	aagactccgt	ctcaaaaaaa	aaaaaaaaaa	aaaagatttg	1860
ttttttcctc	tgcaggttgg	atgtgggaaa	tgaagaaaaa	gaaatggagg	atgatgccta	1920
ggttttttggc	ctatgtaacg	ggaaaagtgg	gagaggaaca	ggttggggga	ggaaaatgaa	1980
gagttctttt	ctcttctggt	ttccctgccc	tcccattcaa	aagccaggaa	atttctacag	2040
ctaggcagga	tgattggctc	cggcatctct	taatttcagt	cctcaaaatc	aagagcttac	2100
accctcaggg	atcttcttgc	agtagaggga	aggggtggtga	cgtacagtga	aaaacatggt	2160
ggccttcttc	atactgagtt	tgagtcccac	ttctgccatt	tctttctttc	atgaccttgt	2220
gcaagtcaacg	actttccaag	ctgcaatttc	ctcatctgtt	aggttgaatg	ttgagaactt	2280
cccggtagga	ttgttatgag	cattaactgc	gtgtttactt	tgtgctgtgt	cttgttctaa	2340
gtgtattatg	gatagtcact	agtttaatcc	tcatatcaaa	tggatgaggt	gtaggtacta	2400
ctattttacac	tctctgacag	ataaggaaac	tgaggatatag	aaggttatta	agtaggttgc	2460
ccactgtcat	aagccagtaa	atggaggagc	tgtatttgaa	ttctggcagg	ctccagaatc	2520
ctgggcctgg	gttcttagct	gctaagtgtc	tctcccttta	aagtgtgaaa	agcgctgcc	2580
catcatgggt	tctcaagtgt	tcgttctgat	gtctcctcca	ttgtctgacc	ttcctccctt	2640
accccgaa	accgaaacat	gcagatcctg	agcttgccca	caatctaggc	cttgggtctt	2700
ctgttctttc	acttggttcc	cttacctgtg	tctctgttcc	tctctagaac	cttcatggca	2760
aaaggcaaga	cttctgtttg	ttgtacctga	cctgtggcac	tatctcttta	ggtggacatc	2820
ttcaataagg	agctactgct	aatccccatc	cacctggagg	tgcattgggtc	cctcatctct	2880
gttgatgtga	ggcgacgcac	catcacctat	tttgactcgc	agcgtaccct	aaaccgccgc	2940
tgccctaagg	tttgaggggg	taggagagag	atgggcaaaa	tgtggggcg	tgagtgaggca	3000
aggcattgca	ggaagaagg	tgggctttgg	gtctttgagg	ggcgacctgg	gcatggtgtc	3060
tgccagcact	gtaccaccca	tactgtgttc	aattgagaaa	cttagggcat	cactttcttt	3120
tccccatcc	acatagcata	ttgccaaagta	tctacaggca	gaggcggtaa	agaaagaccg	3180
actggatttc	caccagggtc	ggaaaggtta	cttcaaaatg	gtgagtttcc	tgaggggagg	3240
gtataggggtg	ttgggtgggga	cagtggtaga	aggcagaaat	tgaagtccta	cccctgggag	3300

```

tctccatgtg aagggcctgc tttctttctc ttctctagaa tgtggccagg cagaataatg 3360
acagtgactg tgggtgctttt gtgttgacagg taagcagatg atggggccac ctccctctagc 3420
tctgaagtca gttgggttaa agggtcggga ggctgttatg catccctca tttggctcat 3480
agtcagttgt ggagcaggaa gtaatctgtt ttagaacacc aaaacactgg cttcactggg 3540
tctcttctgg acttctccat cccacattgg gactgggtct ctaggtcttt tggctctggc 3600
cttcataagag ctccctgcta acctccaaact cagtgtattt tctccatcta aaacattcta 3660
tcaagtaaga acactagctt tagagtcagg ctgtttttga accccagggt gtgggaccct 3720
ggctcccttt ggggatgttc tctgaaggat ggagacacat ctcatatgaa atgtgtagca 3780
caggtcctga cacggggggg ttctcatggc ttgctttgtt aacaccaggt actgcaagca 3840
tctggccctg tctcagccat tcagcttcac ccagcaggac atgcccaaac ttcgtcggca 3900
gatctacaag gagctgtgtc actgcaaact cactgtgtga gcctcgtacc ccagacccca 3960
agcccataaa tgggaaggga gacatgggag tcccttccca agaaactcca gttcctttcc 4020
tctcttgcct ctcccaactc acttcccttt ggtttttcat atttaaagt ttcaatttcg 4080
tgtatttttt tttctttgag agaatacttg tntatttctg atgtgcaggg gatggctaca 4140
gaaaagcccc tttcttcctc tgtttgcagg ggagtgtggc cctgtggccc tgggtggagc 4200
agtcacctc ccccttcccc gtgcagggag caggaawtca gngatggggg gnggggggcg 4260
gacaatagga tnacagcccg ccagatatnc atatatatat atatatatat atatatatat 4320
atatatatat atatatatat atatatatat atatatatat atatatataaa atgccacggg 4380
cctgctctgg tcaataaagg atcctttgtt gatacgtaag tgggtggtctt ccttaagggg 4440
cttcaaatta gtggatatgc ttagctcaga ccttcagcc agtntcttga gactaaaggg 4500
ttcagctttc catccctggc tcaggcactg ccaacacct gtcttcaccc aaacaaatcc 4560
cccagatggg agcagagagc aggaaggagg gaaagtagat aagcctcaag aataagggca 4620
tccgagaggg aagcgtgggg aactggacac aagggactgg ggaggggacc aaccaggatt 4680
catgatagta ccccaaagcc ctttacagtt ttyttccatc cctccaccat ccagccaggg 4740
gaatcctccc atccctacga tatcgctgtt gatttccttc atccctggc acacgtccag 4800
gcagtgtcga atccatctct gctacagggg aaaaacaaat aacatttgag tccagtggag 4860
accgggagca gaagtaaagg gaagtgataa ccccagagc ccggaagcct ctggaggctg 4920
agacctcgcc ccccttgctg gatagggcct acggagccac atgaccaagg cactgtcgcc 4980
tccgcacgtg tgagagtga gggccccaag atggctgcca ggctcagagg cctgactctt 5040
ctatgtcact tccgtaccgg cgagaaaggc gggccctcca gccaatgagg ctgcggggcg 5100
ggccttcacc ttgataggca ctcgagttat ccaatggtgc ctgcgggccg gagcgactag 5160
gaactaacgt catgccgagt tgctgagcgc cggcaggcgg ggccggggcg gccaaaccaa 5220
tgcgatggcc ggggcggagt cgggcgctct ataagttgtc gatgggcggg cactccgccc 5280
tagttttctaa ggatcatgtc tgcgagccag gattcccg 5318

```

<210> 41

<211> 7

<212> PRT

<213> Homo sapiens

<220>

<223> Primer

<400> 41

Met Ser Ala Ser Gln Asp Ser

1

5

<210> 42

<211> 20

<212> DNA

<213> Homo sapiens

<220>

<223> Primer

<400> 42

aggattcccg gtaagaaagg

20

<210> 43

<211> 20

<212> DNA

<213> Homo sapiens

<220>

<223> Primer

<400> 43

aaaccaacag atccagagac

20

<210> 44

<211> 20

<212> DNA

<213> Homo sapiens

<220>

<223> Primer

<400> 44

cgtcatcgag gtgagactgg

20

<210> 45
<211> 20
<212> DNA
<213> Homo sapiens

<220>
<223> Primer

<400> 45
catcccctag agtaactgga

20

<210> 46
<211> 20
<212> DNA
<213> Homo sapiens

<220>
<223> Primer

<400> 46
tgtatcaagg gtgagacctc

20

<210> 47
<211> 20
<212> DNA
<213> Homo sapiens

<220>
<223> Primer

<400> 47
atttgtttag gttatgatgt

20

<210> 48
<211> 20
<212> DNA
<213> Homo sapiens

<220>

<223> Primer

<400> 48

ggctcagcag gtaagagtgg

20

<210> 49

<211> 20

<212> DNA

<213> Homo sapiens

<220>

<223> Primer

<400> 49

ctctgctcag atacagaagg

20

<210> 50

<211> 20

<212> DNA

<213> Homo sapiens

<220>

<223> Primer

<400> 50

agatacctgt gtgagtaatt

20

<210> 51

<211> 20

<212> DNA

<213> Homo sapiens

<220>

<223> Primer

<400> 51

tcttctctag cccccaaata

20

<210> 52

<211> 20

<212> DNA
<213> Homo sapiens

<220>
<223> Primer

<400> 52
caacacccag gtgagggcag

20

<210> 53
<211> 20
<212> DNA
<213> Homo sapiens

<220>
<223> Primer

<400> 53
tttcactag gtagttttgc

20

<210> 54
<211> 20
<212> DNA
<213> Homo sapiens

<220>
<223> Primer

<400> 54
ggaacgagag gtggggccca

20

<210> 55
<211> 20
<212> DNA
<213> Homo sapiens

<220>
<223> Primer

<400> 55

caacctccag gagtggaagc

20

<210> 56

<211> 20

<212> DNA

<213> Homo sapiens

<220>

<223> Primer

<400> 56

atccgccatg gtgtgtttgc

20

<210> 57

<211> 20

<212> DNA

<213> Homo sapiens

<220>

<223> Primer

<400> 57

tctcttccag catggagata

20

<210> 58

<211> 20

<212> DNA

<213> Homo sapiens

<220>

<223> Primer

<400> 58

tgacctgctg gtgagtagag

20

<210> 59

<211> 20

<212> DNA

<213> Homo sapiens

<220>

<223> Primer

<400> 59

cttgacgtag gccagaggca

20

<210> 60

<211> 20

<212> DNA

<213> Homo sapiens

<220>

<223> Primer

<400> 60

atatccacag gtaagcgtag

20

<210> 61

<211> 20

<212> DNA

<213> Homo sapiens

<220>

<223> Primer

<400> 61

tgttttccag aatcggtcga

20

<210> 62

<211> 31

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 62

atctggtacc ggaaatcaac agcgatatcg t

31